DOCUMENT RESUME

ED 372 647 FL 022 348

AUTHOR Mielke, Angela; Flores, Chencho
TITLE Bilingual Technology Equalizes Opportunities in Elementary Classrooms.
PUB DATE 94
NOTE 14p.; In: Malave, Lilliam M. Ed. National Association for Bilingual Education (NABE). Annual Conference Journal, NABE '92-'93. See FL 022 341.
PUB TYPE Reports - Evaluative/Feasibility (142) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Bilingual Education; Classroom Techniques; Computer Software; *Educationally Disadvantaged; *Educational Technology; Elementary Education; *English (Second Language); Individualized Instruction; *Limited English Speaking; Optical Data Disks; Optical Disks; Parent Participation; Videodisks
IDENTIFIERS Two Way Bilingual Education

ABSTRACT

Educational technology is a significant resource for meaningful, active, sensory, and relevant instruction for limited-English-proficient (LEP) students in the elementary grades, particularly those students who are educationally disadvantaged. It is suitable for bridging the instructional gap in bilingual education so these children can have the same educational opportunities as their English-speaking peers and suffer less the effects of cultural and social segregation. Computer software, compact disk, CD-ROM, and videodisk technology provide and store large quantities of subject matter, allow individualization of instruction and instructional materials, permit children to learn at their own speed, and are motivating and non-threatening. These characteristics are useful in instruction in English as a second language, in both one-way and two-way bilingual education, for attractive graphics to involve all students, and even to promote parent involvement. To maximize the potential of these technologies, administrators and teachers need training in effective educational applications, particularly in the classroom, and appropriate and pedagogically sound materials. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 372 647

Bilingual Technology Equalizes Opportunities in Elementary Classrooms

Angela Mielke
Chencho Flores

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Nancy F
Zelaya

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

FL022348

BEST COPY AVAILABLE

BILINGUAL TECHNOLOGY EQUALIZES OPPORTUNITIES IN ELEMENTARY CLASSROOMS

Angela Mielke
Chencho Flores

Abstract

The learning context of our schools must adapt to our changing world, from one in which students are receptacles to be filled by the teacher, to a student-centered learning environment where teachers are coaches. Technology is a significant source to aid schools in achieving instructional strategies which are meaningful, active, and sensory, connected to the real world, in which students are able to construct meaning from their learning and apply it to their lives. Availability of bilingual software, compact discs, and videodisks is increasing, providing needed assistance for equal instruction for the bilingual student.

Introduction

As students enter a classroom, the teacher may wonder how best to give each of these wonderful beings what they need to be successful learners. The teacher's goal is that all students under his/her care be offered the best learning possible. With educational technology becoming available, teachers have new tools to enhance learning. The growing proliferation of technological tools in schools has made educational technology widely available to make possible an equal chance for all children to experience success in learning. Bilingual teachers have an added challenge with children who are Limited English Proficient/Limited English Speaking Abilities (LEP/LESA). Help and instruction for students should be provided in two languages. Quality bilingual products for computers, CD ROM and videodisk players, though not abundant, are becoming increasingly available. Teachers can utilize educational technology to assist in equalizing the education of all students. The aim is not to have high tech schools per se, but to use technology to enable students to become well-educated, productive citizens.

Rationale For Bilingual Education

One might ask why LEP/LESA students need this extra resource since they represent a minority of children. The following statistics show how for example, the number of monolingual Spanish children is growing; therefore, the need for bilingual education becomes evident. Minority language children are growing in number. Due to immigration and the natural population increase, the number of Hispanic citizens in the United States continues to grow. Fourteen percent of the population aged five and over spoke a language other than English in 1990 compared with eleven percent in 1980 ("Census Reports," 1993). Spanish is the most common non-English language spoken with 54% of the language-minority population ("Census Reports, " 1993). In Texas, student

population overall rose 18% in the last decade, while the LEP population rose 53% (Texas Education Agency, 1992). Due to immigration and natural increase, the number of U.S. Spanish speakers will continue to grow. Spanish is spoken ten times more frequently than any other language and is the prevailing non-English language in 39 states and the District of Columbia ("Census Reports," 1993). According to an October 1993 report of the Projections Department of the U.S. Bureau of the Census, the Hispanic population is the fastest growing group and will total 34 million by the year 2003 (staff, personal communication, October 4, 1993). Of that total, 9 million will be between the ages of 5 & 18. However, only a bare majority of the native born citizens will be given Spanish as their first language (Texas Education Agency, 1992). The language shift from Spanish to English usually spans two to three generations (California Association for Bilingual Education, 1992). Continual immigration to the U.S., especially in border states, of Spanish-speaking families can be expected, particularly with the recent passage of the North American Free Trade Agreement (NAFTA). The increase in the market for Americans who are bilingual in English and Spanish, the major second language in the South Central Region of the United States, raises the opportunity for competent bilingual personnel to find jobs. Children who initially have limited English abilities have the opportunity to become *literate* in two languages through our public school educational system, if they are properly educated. In fact, some of the same technology discussed here can be used to teach monolingual *English* students how to speak *Spanish*.

Bilingual Education Programs

Teachers must determine how best to teach their potentially bilingual children so they can learn as well as their majority English peers. Research has shown that bilingual education does not slow the process of language shift to English. Bilingual education should actually facilitate a smooth transition to English (California Association for Bilingual Education, 1992). Bilingual classes enable Hispanic children to maintain grade level development and avoid being held back, while at the same time learning English. Children are best served by programs that teach both Spanish and English, thereby simultaneously developing basic reading and computation skills. A holistic attitude toward preserving native culture, combined with an ever-increasing integration of English and a new culture, will best serve our immediate generations of students (California Association for Bilingual Education, 1992). Bilingual education can conceivably give students an advantage over the monolingual English child in the future. Bilingualism is a skill increasingly sought after by employers in the labor market.

Effects of Segregation

Demographic studies of school enrollments done in 1989 demonstrate that Hispanic students of all backgrounds - Mexican, Puerto Rican, Cuban, and Latin American - have become steadily more isolated in virtually all parts of the country since 1968. Evidence suggests that the isolation and segregation may result in detrimental effects. In addition, Hispanics have the highest dropout rate of

any ethnic group in this country. In 1989, one-half of all Mexican-American and Puerto Rican students did not graduate from high school. Furthermore, few Hispanic students are prepared for college in the way that many non-Hispanic students are. Low teacher expectations and assignment to non-college bound curriculum "tracks" often hinder the academic success of the Hispanic student (Wells, 1989).

Benefits of Bilingualism

Building a quality bilingual program with a solid foundation in what research has shown to be effective is imperative for giving non-English dominant children equal opportunities as their English speaking peers.

> research has shown that young children who live in supportive and nurturing bilingual environments do not develop linguistic handicaps....Bilingual children, both at early and late periods of development, do not differ significantly from monolinguals, with no significant differences on measures of vocabulary, phonological, or syntactic development....Bilingual children raised in supportive and nurturing environments demonstrate linguistic and cognitive advantages in comparison to monolingual children. (García, 1990).

Bilingual teachers who can build on the phonological and syntactic development of language facilitate students' learning. Bilingual education can be the means by which this occurs. Bilingual acquisition involves a process that builds on an underlying base for both languages. Naomi Baron, professor of linguistics at the American University in Washington, states that, "Children who know more than one language are significantly better at thinking about problems from more than one perspective, compared with children who are monolingual" (Kutner, 1992). Active cultivation of bilingual development is desirable for children. Bilingual language instruction that matches the natural social context of the child is recommended by research. "The better a child masters language in general, including related cognitive and social skills of effective communication in two languages, the better the child can master academics in English" (García, 1990).

Research also indicates that bilingual education programs can, if properly implemented, significantly enhance academic achievement in comparison to English only instructional programs (Lewelling, 1991). An integrated curriculum, responsive to the linguistic ability of students and implemented by trained bilingual teachers is needed. There is evidence that advanced bilingualism brings with it advanced cognitive development. Bilinguals outperform monolinguals on certain linguistic tasks, and on tasks involving cognitive flexibility and divergent thinking (García, 1990). Children should be made to feel that their bilingualism, like their biculturalism, is an academic asset, not something for which they or their families need to feel embarrassment. Such differences should be celebrated (García, 1990). Differences should be part of the building blocks of a curriculum that is sensitive to multiculturalism. These building blocks, in establishing cultural value and pride, can provide incentives for students to learn.

Limited English Proficient (LEP) Students

Students are sometimes mainstreamed into the regular classroom because they appear to communicate well in spoken English. Simply speaking well in English does not indicate that there is sufficient language proficiency for total English instruction. In English-only classrooms many LEP students "encounter difficulties understanding and completing schoolwork in the more cognitively demanding language needed for successful performance in academic subjects" (Lewelling, 1991). Basic proficiency needed in second language learning is often not adequate for successful learning. Language minority students either do not have exposure to or lack an understanding of the vocabulary and context-specific language needed to perform the more demanding tasks required in academic courses.

A study done by Lewelling in 1991 substantiates the need for bilingual education. The level of proficiency in the first language has a direct influence on the development of proficiency in the second language. The lack of continuing first language development has been found, in some cases, to inhibit the levels of second language proficiency and cognitive academic growth. The study also found that "native language proficiency is a strong indicator of second language development.... Cognitive maturity, knowledge, and experience in the first language transfers to the second language" (Lewelling, 1991). If learning to read means making sense of printed material, of understanding what is written, it is easier done in language and concepts already understood. Once one learns to read in the first language, mechanical knowledge of reading rapidly transfers to other languages acquired. "For academic achievement, it does not matter when second language learning begins, as long as cognitive development continues at least through age 12" (Lewelling, 1991). Instruction focusing on communication skills for only two or three years will often slow down LEP students two to three years to fall behind their English-speaking peers in school subjects. This is because linguistic skills needed for student success haven't been fully developed in the second language. Primary language instruction throughout elementary school years, "coupled with gradual introduction of the second language, seems to produce a consistent pattern of greater achievement in the second language at the end of 4-7 years of schooling....Cognitive skills and conceptual knowledge can be transferred from the native language to English" (Lewelling, 1991).

English as a Second Language (ESL)

Transferring skills into the second language is one of the aims of bilingual education. Time for this transfer to manifest itself is essential to meeting the needs of monolingual Spanish or other non-English speaking students. "By the year 2000, it is anticipated that the number of LEP students aged 5-14 in the U.S.A. will reach approximately 3.4 million" (McKeon, 1987). These will be students who may lack the necessary English skills for immediate success in an all-English curriculum. There are a number of different program structures to provide ESL instruction. Regardless of the program design, whether stand-alone ESL or ESL-plus, the minimal goal of an ESL program should be to provide

each student with the English skills necessary to function successfully in an academic setting. Successful programs have three ingredients in common:

1. High quality subject matter teaching in the first language, without translation.
2. Development of literacy in the first language.
3. Comprehensible input in English.
(California Association for Bilingual Education, 1992)

Technological Opportunities

Technology is fast becoming the trend to help ensure that children learn. Many language minority children are not proficient in English and need whatever extra help is available to make sure they have equal educational opportunity as their English speaking peers. Due to the growing availability of personal computers, software in Spanish and English may now be utilized in the classroom to develop thinking skills and competence in academic areas. After the dominant language has been mastered, children can learn English in the most effective manner possible. A review of literature indicates that there are presently various software programs developed specifically for the language minority student. The bilingual student benefits from computer assisted learning because of the extra time, patience, interactivity, and feedback provided by this technology leading to more expedient and efficient learning. The motivational factor for the child in using computers is also very high. Multimedia software takes advantage of sound and graphic capabilities of computers, allowing the child to be exposed to learning in a variety of modalities. Learning style theories emphasize the importance of allowing the child to learn in his/her dominant modality.

Technology can help give students a rich linguistic environment that makes regular use of their bilingualism for academic purposes. An example of how recent technological innovation holds promise for teaching bilingual students is in auditory skill development. Auditory development is the basis for learning to speak a second language. A superior format for learning a language is delivered via Compact Disk Read Only Memory (CD ROM) players with their high-quality audio and storage capabilities. The enhanced audio provided by CD ROM technology and computers give learners a higher quality of auditory perceptual skill development that is so vital for learning a second language (Greenfield, 1993).

The abundant storage capacity of a compact disk (CD) is illustrated by its ability to store a whole set of encyclopedias on one CD. The quality and quantity of information available through CD ROM and computer technology gives the teacher a wider variety and volume of superior tools with which to work.

Academic Achievement of LEP Students

Children need to acquire two kinds of language. One is conversational language that is used for informal, interpersonal communication. The other is academic language proficiency that is used in school for learning and discussing abstract ideas that will be tested. Conversational English is usually acquired very rapidly, in two years or less. Academic language takes longer, generally five to seven years. Hurdles to be crossed by the student range from oral competence to testing performance. Language acquisition results from comprehensible input, and background knowledge helps make input comprehensible (California Association for Bilingual Education, 1992). Before LEP students are confronted with achieving in the regular classroom, they need to experience English as a tool for learning subject matter, not just in communication, or survival skills. When students learn subject matter in the primary language, they gain knowledge, knowledge of the world, as well as specific subject matter knowledge. Knowledge does not manifest itself in the English language. This knowledge in turn makes thinking skill development in the primary language more comprehensible and speeds second language acquisition. CD and videodisk programs such as *Cell-abration* and *Windows on Science* are excellent resources for providing subject matter in quality and quantity, with availability for the Spanish speaking child to explore the environment. Background knowledge provided through first language mastery will make reading in English more comprehensible. It will help the child develop English reading ability, vocabulary, grammar, and writing style (California Association for Bilingual Education, 1992). Technology offers tools for teaching in the primary language and in learning the second language.

Story Tailor is a software series of story and poem templates in Spanish and English. These templates allow the teacher to customize the reading content to personalize it for students. Students can become an integral part of the reading selection and can be the main characters. Their ideas can be incorporated into the stories and poems and so provide familiarity with the reading content, important for learning in any language. *Español Para Ti/English For You* contains writing activities that inspire children to write their thoughts in their dominant language, either English or Spanish, for favorite children's books such as *Where the Wild Things Are (Donde Viven Los Monstruos).*

ESL

In all the studies investigated, there is no question that children in bilingual programs eventually learn to communicate in English. Teaching grade level curriculum while teaching English is the goal of bilingual education. Reaching grade level means that the former LEP children are scoring at the 50th percentile on standardized tests. This means that they are scoring at the average level of native English speaking children of the same age! Some software can assist in any ESL program instruction. With use of *Stickybear Reading* and *Reading Maze* for example, student progress in ESL development can be monitored and recorded without direct supervision of the teacher. *The Playroom* and *1-2-3 Sequence Me* are two other software programs well suited to use in an ESL program. Children learn language by experimenting and playing with it, not by rote memorization.

With the proper software, computers provide many opportunities for this kind of learning.

Bilingual Instruction for All Students

Two-way language development programs are full-time programs that use two languages, one of which is English. These programs seek to promote bilingual education as an enrichment program for all students, give better understanding between two linguistic communities, give access to equal education by all students, and provide educational excellence (Lange, 1990; Freeman & Freeman, 1988). School districts sometimes find themselves lacking qualified bilingual teachers while still needing to attend to the needs of Spanish dominant students. Spanish language arts software, such as *Stickybear Reading* and the *Story Tailor* series, facilitates the child's learning in the dominant language until qualified teachers become available.

Incorporating Language and Culture into Whole School Program

Educators who see their roles as adding a second language and cultural affiliation to students' repertoires empower those students. For instance, schools could provide signs in the school office and elsewhere to welcome people in Spanish and English. Pairs of students, one English and one Spanish dominant, can be taught to use programs such as *The Print Shop* to help make these signs. *MacWrite II* and *ClarisWorks* are two examples of word processing software available in both English and Spanish versions. A purpose of using such software is to provide opportunities for bilingual students to communicate with one another in their first language in cooperative learning environments (Cummins, 1991). Computer programs provide an excellent means for children to work together toward a common goal. Administrators and teachers should recruit people who can tutor students in their first language. A one-on-one environment has been a viable method for years to help individual children.

Pictures and objects of the various cultures should be displayed in schools. Again, the ability of the computer to print graphics and eye-catching text through a variety of programs can be instrumental in this process. Telecommunications can be used to research these topics and find more graphics that are useful.

Students should be encouraged to write in their dominant language. It is easier to express oneself in the language where one feels most comfortable. All language learning should be interactive. Teacher guidance and facilitation, rather than total reliance on a computer, are more effective ways to promote meaningful, higher level thinking skills. To learn language arts and reading skills, programs such as *Stickybear Reading* can be used. Teaching process writing in a whole-language environment can be provided through programs such as *Story Tailor*, *Word Weaver* and *Write On!*.

Parent Involvement

"The evidence is clear that parental encouragement, activities and interest at home, and parental participation in schools and classrooms positively influence achievement, even after the students' ability and family socioeconomic status are taken into account" (Simich-Dudgeon, 1986). Students who are part of parent

involvement programs show higher reading achievement than children who are not. Children who are encouraged to read to their parents and talk with their parents about their reading have higher reading gains than children who have not had this opportunity (Simich-Dudgeon, 1986). There does not have to be a computer in the house for parents to understand what the child is doing at school. For instance, when they bring home a *Story Tailor* selection that has familiar names and places incorporated, children and parents are more likely to find a higher interest level in the material. This relevance may motivate them to spend more time reading together, and help to bridge the gap between school and home.

Effectiveness of Instructional Technology in Bilingual Programs

Technology can have a significant positive effect on LEP/LESA students. Computers allow students to learn at their own speed in a highly motivated and non-threatening environment. Learning is *individual*. The computer gives the student different ways to learn at different times. Computers and their materials can be varied. Computers equalize all education from the disadvantaged, to the gifted, to the student of any given learning style (Dunn, Beaudry, & Klavas, 1989).

One elementary principal, Michael Hoy of San Juan Elementary School, recently stated, "It is critical to empower our more disadvantaged students with the same tools as their fellow students without alienating those who are not disadvantaged. We want our school to be a place where all parents are happy to send their children" (Kutner, 1992).

A study by the Department of Education examined the effectiveness of two major types of instructional technology used in bilingual education programs: computer assisted instruction and video instruction. Results established that both of these technologies can have a significant positive effect on LEP/LESA students. Computers have the potential to permit students to learn at their own speed in a highly motivating and non-threatening environment. (Department of Education, 1984)

Decades of research prove the effectiveness of cooperative learning. One study shows cooperative grouping improves computer based learning ("Can Technology Help," 1992). One of the abilities of computers is in providing an additional means of instruction rather than merely replicating teacher guided instruction. Computers also add to the whole-language approach in the curriculum. Students can use Spanish literature available on CD ROMs, such as the *Discis Books* , *Just Grandma & Me*, *Arthur's Teacher Trouble*, and *The Hare and the Tortoise*.

Implementation

To maximize the computer's potential, administrators and teachers need training structured for computer application to educational problems. Impediments to effectiveness include the lack of instructionally and technologically sound software, and lack of training in computer use and planning. Teacher training and selection of quality software are essential elements in utilizing technology as an integral part of the curriculum.

Minimum teacher training should include use of technology within the classroom setting. "Technology" training encompasses use of computer and software applications, telecommunications, CD ROM players, and videodisk players. Institutions of higher education are beginning to respond to this need. For example, in 1991, The University of Texas at Austin revamped its computer literacy course for its teacher training program. According to Dr. Judi Harris (personal communication, November 12, 1993), University of Texas, Director of the Computer Literacy course, the course concentrates its study on tools applicable in K-12 classrooms. The class focuses on the basics of word processing, data bases, spreadsheets, programming in HyperCard and LogoWriter, telecommunications, and CD ROM searches. Subject area courses are advised to teach specific computer application programs which would be useful for that subject. The Bilingual Education Department at U.T., according to Department Head Dr. George Blanco (personal communication, November 15, 1993), uses technology to train future teachers to facilitate their proper use of Spanish word pronunciation with accents and for on-line communications with classmates and professors.

Good quality children's software, whether for computers, CD ROM players or videodisks, can often be recognized by the presence of certain characteristics or program features. The program itself and the documentation must be thoroughly examined. It should be **appropriate** for the student group who will use it, and carry out stated **objectives**. The structure should be **pedagogically sound** and contribute to children's **comprehension** of the world around them. A high degree of **interaction** from the children, calling for thoughtful responses and providing options that require children to make choices is best. Additional considerations should be made when evaluating bilingual software. It should **supplement**, not supplant, language arts objectives. Awareness of use of **colloquialisms**, relationship to the **curriculum**, and whether it is for **ESL or bilingual** mainstream are essential considerations. Finally, the quality of the **translation,** verbatim or clausal meaning, should be checked.

References

Arthur's Teacher's Troubles. (1992). [Computer Program]. Novato, CA: Brøderbund Software, Inc.

California Association for Bilingual Education. (1992). On Course: Bilingual Education's Success in California. Los Angeles: Author.

Can Technology Help? (1992). Electronic Learning, 12(3), 18-19.

Cell-Abration. (1992). [Computer Program]. Lewisville, NC: Science for Kids.

Census Reports Sharp Increase in Number of Non-English Language-Speaking Americans. (1993). NABE (National Association for Bilingual Education) News, 16(6), 1.

ClarisWorks. (1993). [Computer Program]. Santa Anna, CA: Claris Corporation

Cummins, J. (1991). Empowering Culturally and Linguistically Diverse Students with Learning Problems. Reston, VA: Council for Exceptional Children. (ERIC Document Reproduction Service No. ED 333 622).

Department of Education. (1984). Review of the State-of-the-Art of Educational Technologies Implemented in Programs Serving LEP Students. Washington, DC: Department of Education. (ERIC Document Reproduction Service No. ED 255 076).

Discis Books. (1991). [Computer Program].Toronto, Canada: Discis Knowledge Research, Inc.

Dunn, R., Beaudry, J. S., & Klavas, A. (1989). Survey of Research on Learning Styles. Educational Leadership, 46(6), 50-59.

Español para ti/English for you. (1991). [Computer Program]. Hood River, OR: Humanities Software, Inc.

Freeman, D., & Freeman, Y. (1988). Sheltered English Instruction. Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 301 070).

García, E. (1990). Bilingualism and the Academic Performance of Mexican-American Children: The Evolving Debate. Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 321 963).

Greenfield, E. (1993). Multimedia Titles: Educational CD-ROM and Videodisk Choices Abound. T-H-E- Journal, 20(7), 10.

The Hare and the Tortoise. (1993). [Computer Program]. Novato, CA: Brøderbund Software, Inc.

Just Grandma & Me. (1992). [Computer Program].Novato, CA: Brøderbund Software, Inc.

Kid Pix. (1992). [Computer Program]. Novato, CA: Brøderbund Software, Inc.

Kutner, L. (1992, December 5). Misconceptions hurt bilingual education. Austin-American Statesman, pp. D12

Lange, D. L. (1990). Two-Way Language Development Programs. Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 321 589).

Lewelling, V. W. (1991). Academic Achievement in a Second Language. Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 329 130).

McKeon, D. (1987). Different Types of ESL Programs. Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 289 360).

MacWrite II. (1989). [Computer Program]. Santa Anna, CA: Claris Corporation

1-2-3 Sequence Me. (1992). [Computer Program]. Pleasantville, NY: Wings for Learning, Sunburst Communications.

The Playroom. (1991). [Computer Program]. Novato, CA: Brøderbund Software, Inc.

The Print Shop. (1991). [Computer Program]. Novato, CA: Brøderbund Software, Inc.

Reading Maze. (1991). [Computer Program]. Scotts Valley, CA: Great Wave Software

Sendeck, M. (1984). Donde viven los monstruos. [Where the wild things are]. (A. Gervás, Trans.). Madrid, Spain: Ediciones Alfaguara. (Original work published 1963).

Sendeck, M. (1963). Where the wild things are. New York: Harper & Row.

Simich-Dudgeon, C. (1986). Parent Involvement and the Education of Limited-English Proficient Students. Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 279 205).

Stickybear Reading. (1992). [Computer Program]. Middletown, CT: Optimum Resources, Inc.

Story Tailor. (1992). [Computer Program]. Hood River, OR: Humanities Software.

Texas Education Agency. (1992). PEIMS (Public Education Information Management System) Enrollment Data. In Limited English Proficiency Analysis. Austin, TX: Author.

Wells, A. S. (1989). Hispanic Education in America: Separate and Unequal. Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 316 616).

Windows on Science. (1991). [Computer Program]. Warren, NJ: Optical Data Corporation.

Word Weaver. (1992). [Computer Program]. Hood River, OR: Humanities Software.

Write On! (1992). [Computer Program]. Hood River, OR: Humanities Software.